

10-24mm.

167.(new) The spinal fusion implant of claim 145 in which said length is in the range of 10-32mm.

A3/
Cont.

REMARKS

Claims 27, 52, 76, 83, 85, 97, 99, 100, 133, and 134 have been cancelled. New claims 137-167 have been added to further defined Applicant's claimed invention.

With respect to the rejection of claims 1-4, 22, 26-29, 48, 53-54, 72, 77, 94, 98-103, 120, 124-126 and 131 under 35 U.S.C. § 102(b) over Kuntz, independent claims 1, 26, 53, 98, and 124 are directed to an implant having either a body that is frusto-conical, a bone engaging means having an outer locus that is frusto conical, or having both the body and the outer locus of the bone engaging means being frusto-conical.

Contrary to the Examiner's assertion, Kuntz does not teach an implant having a body that is frusto-conical or a thread having an outer locus that is frusto-conical. Kuntz also does not teach a cylindrical threaded implant having a truncated side. Figure 15 of Kuntz is a cross-sectional view of a rectangular prosthesis having an alternative means for holding the prosthesis rather than the flange 15 of Figure 1. (Col. 13, lines 34-43). The

rectangular prosthesis of Kuntz has a tapered leading end to facilitate insertion. The Kuntz prosthesis is not frusto-conical. A frusto-conical configuration would be contrary to the teaching in Kuntz against "wedging" the vertebrae with its prosthesis as the "the prosthesis would be sitting as a wedge which would tend to cause it to dislocate anteriorly as it would tend to be 'squirted out' anteriorly." (Col. 9, lines 10-20).

It is submitted that the rejection of claims 1-4, 22, 26-29, 48, 53-54, 72, 77, 94, 98-103, 120, 124-126 and 131 under 35 U.S.C. § 102(b) over Kuntz has been overcome.

The Examiner rejected claims 5-10, 11, 13-16 17-20, 21 23-24, 30-36, 38-45, 47, 49-50, 55-70, 71, 73-74 78-93, 95-96, 104-109, 111-118, 119, 121-122, 127-129 and 132-135 under 35 U.S.C. § 103 over Kuntz in view of one of Bagby, Ray '260, Brantigan, and Ray '740. The Examiner relies on Bagby for a bone growth material, a fusion promoting material, a porous outer surface, openings and an internal chamber. The Examiner relies on Ray '260 for a biabsorbable material and a mesh like material. The Examiner relies on Brantigan for posts, surface roughenings, and wells. The Examiner relies on Ray '740 for a means for closing an access opening.

Based on the understood teaching of the references cited by the Examiner, it is respectfully submitted that the claims, as amended, are patentable under 35 U.S.C. § 103 over these references taken alone or in proper combination. Applicant's claimed invention is directed to an implant having either a body that is frusto-

conical, a bone engaging means having an outer locus that is frusto conical, or having both the body and the outer locus of the bone engaging means being frusto-conical for independent claims 1, 26, 53, 77, 98, and 124, respectively. For independent claim 131, applicant's claimed invention is directed to an implant having a mesh-like material on the exterior of the implant, in which the mesh-like material has a plurality of interstices for receiving fusion promoting material and for engaging the implant to the adjacent vertebrae of the spine. Applicant respectfully submits that the applied references would not have suggested applicant's claimed implant as recited in independent claims 1, 26, 53, 77, 98, 124, and 131 and the claims dependent therefrom.

Furthermore, Applicant has added new independent claims 137 and 145 to further define Applicant's claimed invention having arcuate portion oriented toward the adjacent vertebrae and having a distance between the arcuate portions increasing for a first and to a second end on a body and bone engaging means, respectively.

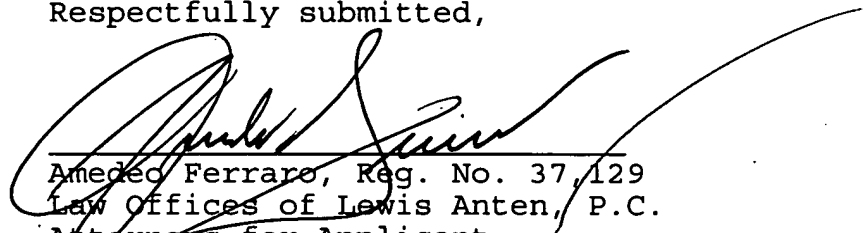
For the foregoing reasons, it is submitted that the pending claims and the newly added claims are patentable over the cited art and are now in condition for allowance. A Notice of Allowance is respectfully requested. Should there be any remaining or further questions, the Examiner is requested to please contact the undersigned directly.

If there are any other fees due in connection with the filing of this response, please charge our Deposit Account No. 01-2138. If a fee is required for an extension of time under 37

C.F.R. § 1.136 not accounted for in the papers accompanying this response, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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